

**What is claimed is:**

1. An energy recovering apparatus of a plasma display panel, comprising:
  - 5       said plasma display panel;
  - a voltage source for supplying a sustain voltage to the panel;
  - a first inductor for recovering an energy stored in the panel into the voltage source;
  - 10       a second inductor for receiving an energy from the voltage source in which the recovered energy has been stored to charge the received energy; and
  - switching devices for shutting off a path between the voltage source and the second inductor in a state in which
  - 15       energy has been stored in the second inductor to derive an inverse voltage into the second inductor and allowing said inverse voltage to be applied to the panel.
2. The energy recovering apparatus as claimed in claim 1,
  - 20       wherein the voltage source includes:
    - a first voltage source connected between the panel and the ground voltage source; and
    - a second voltage source connected between the first voltage source and the ground voltage source.
- 25       3. The energy recovering apparatus as claimed in claim 2, wherein each of the first and second voltage sources has a voltage value equal to a half of the sustain voltage.
- 30       4. The energy recovering apparatus as claimed in claim 1, further comprising:
  - a first switch for forming a path between the voltage

source and the panel such that said sustain voltage of the voltage source is supplied to the panel;

5 a second switch for forming a path among the panel, the first inductor and the voltage source such that an energy from the panel is recovered into the voltage source; and

a first diode connected between the second switch and the panel.

10 5. The energy recovering apparatus as claimed in claim 2, wherein the switching devices include:

a third switch connected between a node positioned between the second inductor and the panel and the ground voltage source; and

15 a fourth switch connected between the second inductor and the second voltage source.

6. The energy recovering apparatus as claimed in claim 5, wherein the switching devices further include:

20 a second diode connected between the fourth switch and the second inductor; and

a third diode connected between a node positioned between the fourth switch and the second diode and the third switch.

25

7. The energy recovering apparatus as claimed in claim 5, wherein said inverse voltage is generated when the third and fourth switches are turned off in a turned-on state.

30 8. The energy recovering apparatus as claimed in claim 6, wherein the second and third diodes form a path between the second inductor and the panel such that said inverse

voltage is supplied to the panel.

9. An energy recovering method for a plasma display panel, comprising the steps of:

5 (A) supplying a sustain voltage from a voltage source to the panel;

(B) recovering an energy stored in the panel into the voltage source using a first inductor;

10 (C) receiving an energy from the voltage source in which the recovered energy has been stored to thereby charge the energy into a second inductor; and

(D) shutting off a path between the voltage source and the second inductor in a state in which an energy has been stored in the second inductor using the switching  
15 devices to derive an inverse voltage into the second inductor and applying said inverse voltage to the panel.

10. The energy recovering method as claimed in claim 9, wherein said (A) step includes:

20 forming a path between the first and second voltage sources and the panel connected in series using a first switch to thereby apply voltages from the first and second voltage sources to the panel.

25 11. The energy recovering method as claimed in claim 10, wherein said (B) step includes:

forming a path between the panel and the second voltage source going by way of the first inductor using a second switch connected between the first inductor and the  
30 panel to thereby recover energy of the panel into the second voltage source.

12. The energy recovering method as claimed in claim 10,  
wherein said (C) step includes:

forming a path between the second voltage source and  
the second inductor using a third switch connected between  
5 the second voltage source and the second inductor and a  
fourth switch connected between the second inductor and a  
ground voltage source.

13. The energy recovering method as claimed in claim 12,  
10 wherein said inverse voltage is generated when the third  
and fourth switches are turned off in a turned-on state.

14. The energy recovering method as claimed in claim 12,  
wherein said (D) step includes:

15 forming a path among the second inductor, a panel  
capacitor, a second diode, a first diode and the second  
inductor using the first diode connected between the third  
switch and the second inductor and the second diode  
connected between a node positioned between the first  
20 diode and the third switch and the ground voltage source.